

REMARKS

I. Introduction

Claims 10-16 are pending in the present application. Applicants respectfully request the Examiner to reconsider the above-captioned application in view of the following remarks.

II. Drawings

The Examiner objected to the drawings because the same reference numerals refer to different elements in different figures. As shown in the attached replacement sheet and annotated marked-up drawing, Figure 2 has been amended to introduce corrected reference numerals. The Specification has been similarly amended to reflect the changes made to the reference numerals shown in Figure 2. Applicants respectfully request withdrawal of the objection to the drawings.

III. The Rejections Of Claims 10-16 Under 35 U.S.C. § 103(a) Should Be Withdrawn

Claims 10-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 2,450,306 (“Sickles”) in view of U.S. Patent No. 3,765,065 (“Hay”).

Applicants respectfully submit that the rejection should be withdrawn for the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). If a proposed modification would render the prior art invention being modified unsatisfactory for its

intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie obvious*. In re Ratti, 270 F.2d 810, 123 USPQ 349 (C.C.P.A. 1959); M.P.E.P. §2143.01.

Claim 10 recites “a substantially annular clip having two portions, each portion having two end sections, wherein for each portion of the annular clip, the radial cross-section decreases from one end section to the other end section.” In support of the rejection, the Examiner states in the final Office Action that “Hay discloses a snap ring comprising an annular clip (128) formed of two portions each having a radial cross-section which decreases from one end to the other,” and that “it would have been obvious for one to . . . form the clip portion of Sickles with decreasing radial cross sections as disclosed in Hay in order to facilitate the flexing of the clip portions,” since “decreasing cross section of the clip portion would allow for greater flexing at the ends which in turn would make it easier to operate the clip by requiring less force.” (Final Office Action, pp. 2-3). However, Applicants note that the actual teachings of Sickles and Hay, as a whole, contradict the Examiner’s asserted modification, for at least the following reasons.

First, there is absolutely no teaching or suggestion whatsoever in the specification of Hay regarding the shape of the snap ring 128. Even if one may argue that the figures of Hay show a snap ring with decreasing radial cross-section, there is simply no discussion regarding the shape of the cross-section, let alone the reason for the particular shape of the cross-section. Accordingly, the assertion that one of ordinary skill in the art would derive any motivation to modify the clip of Sickles based on the teachings of Hay is simply unsupported. Second, even if one assumes for the sake of argument that Hay would suggest to one of ordinary skill in the art to use a decreasing cross-section for the annular arms (with which conclusion Applicants do not agree), the teachings of Sickles clearly contradict the conclusion that one of ordinary skill would modify the clip of Sickles to incorporate decreasing cross-section for the annular arms in the manner of the present invention. In accordance with the present invention, “[d]ue to the fact that the radial cross-section of the two limbs of the snap ring taper off towards their unattached ends, the snap ring is uniformly deformed in

response to its two limbs being compressed upon installation.” (Substitute Specification, p. 2, l. 2-6). However, uniform deformation of the two limbs is clearly contrary to the intended operation of the clip disclosed in Sickles, since Sickles teaches that “the curving part 16 is yieldable so that the legs 14 and 18 may be moved relatively and the leg 18 may be moved downwardly relative to the leg 14 against the spring action of the portion 16.” (Col. 2, l. 16-20). Accordingly, since the decreasing cross-section for the annular arms would tend to make the annular arms deform in uniform fashion, **which would be counter to the goal of enabling the leg 18 to move downwardly relative to the leg 14 against the spring action of the portion 16** in Sickles, there would be no reason to modify the design of the Sickles clip to have decreasing cross-section for the annular arms.

Independent of the above, Applicants note that the Examiner’s asserted motivation for modifying the clip of Sickles with decreasing cross-section for the annular arms, i.e., “in order to facilitate the flexing of the clip portions,” since “decreasing cross section of the clip portion would allow for greater flexing at the ends which in turn would make it easier to operate the clip by requiring less force,” is simply not applicable to the clip of Sickles since Sickles clearly indicates that flexibility is not an issue: “the curving part 16 is yieldable so that the legs 14 and 18 may be moved relatively.” (Col. 2, l. 16-17). Accordingly, for this additional reason, there would be no reason to modify the design of the Sickles clip to have decreasing cross-section for the annular arms.

In view of the above discussion, Applicants respectfully submit that the combination of Sickles and Hay does not render obvious claim 10. Claims 11-15 depend from claim 10, so the above argument regarding claim 10 applies equally to claims 11-15, and the combination of Sickles and Hay also fails to render obvious claims 11-15 for at least this reason.

Claims 10-14 stand rejected under 35 U.S.C. § 103(a). It is contended that claims 10-14 are unpatentable over PCT International Published Patent Application No. WO 97/12170 (“Bartholomew”) in view of Hay. Applicants respectfully submit that this rejection should be withdrawn for at least the following reasons.

In support of the rejection, the Examiner cites the snap ring shown in Figs. 7 and 8 of

Bartholomew, and the Examiner concludes that “it would have been obvious . . . to form the clip portion of Bartholomew with decreasing radial cross section as disclosed in Hay in order to facilitate the flexing of the clip portions,” since “decreasing cross section of the clip portion would allow for greater flexing at the ends which in turn would make it easier to operate the clip by requiring less force.” (Final Office Action, p. 3). However, as discussed above, there is absolutely no teaching or suggestion in the specification of Hay regarding the shape of the snap ring 128, i.e., there is simply no discussion regarding the shape of the cross-section, let alone the reason for the particular shape of the cross-section. Furthermore, the Examiner’s asserted motivation for modifying the clip of Bartholomew with decreasing cross-section for the annular arms, i.e., “to facilitate the flexing of the clip portions,” since “decreasing cross section of the clip portion would allow for greater flexing at the ends which in turn would make it easier to operate the clip by requiring less force,” is simply not applicable to the clip of Bartholomew since Bartholomew clearly indicates that flexibility is not an issue: Bartholomew provides a hand-release tab 68, which facilitate easy flexing of the annular arms 64. (Bartholomew, p. 16, l. 1-4; Figs. 7-10). Accordingly, the assertion that one of ordinary skill in the art would derive any motivation to modify the clip of Bartholomew based on the teachings of Hay because of the alleged desire to facilitate “greater flexing at the ends” is simply unsupported.

In view of the above discussion, Applicants respectfully submit that the combination of Bartholomew and Hay does not render obvious claim 10. Claims 11-14 depend from claim 10, so the above argument regarding claim 10 applies equally to claims 11-14, and the combination of Bartholomew and Hay also fails to render obvious claims 11-14 for at least this reason.

Claim 15 stands rejected under 35 U.S.C. § 103(a). It is contended that claim 15 is unpatentable over Bartholomew in view of U.S. Patent No. 3,442,171 (“Engelmann”). Applicants respectfully submit that this rejection should be withdrawn for at least the following reasons.

Claim 15 ultimately depends from claim 10. Consequently, all claim limitations of claim 10 of the present application that Bartholomew and Engelmann do not teach or suggest are also not taught or suggested with respect to claim 15 of the present application.

Bartholomew clearly doesn't teach or suggest that "for each portion of the annular clip, the radical cross-section decreases from one end section to the other end section." Furthermore, nothing in Engelmann teaches that "for each portion of the annular clip, the radical cross-section decreases from one end section to the other end section." Accordingly, even if there were some motivation to combine Bartholomew and Engelmann, the resulting combination would not render obvious the invention of parent claim 10. In addition, even if one further considered the teachings of Hay in conjunction with the combination of Bartholomew and Engelmann, Applicants note that there would be no motivation to modify the clip of Bartholomew/Hay with decreasing cross-section for the annular arms since Bartholomew clearly indicates that flexibility of the annular arms is not an issue.

In view of the above discussion, Applicants respectfully submit that the combination of Bartholomew and Engelmann (or even in conjunction with Hay) does not render obvious claim 10, from which claim 15 ultimately depends. Accordingly, the obviousness rejection of claim 15 should be withdrawn.

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the Applicants' admitted prior art in view of Bartholomew and Hay. Applicants respectfully submit that this rejection should be withdrawn for at least the following reasons.

In support of the rejection, the Examiner contends that the combination of Bartholomew and Hay discloses the snap ring recited in claim 16. However, as discussed above, there would be no logical motivation for making the modification asserted by the Examiner. First, there is absolutely no teaching or suggestion in the specification of Hay regarding the shape of the snap ring 128, i.e., there is simply no discussion regarding the shape of the cross-section, let alone the reason for the particular shape of the cross-section. Furthermore, the Examiner's asserted motivation for modifying the clip of Bartholomew with decreasing cross-section for the annular arms, i.e., "to facilitate the flexing of the clip portions," since "decreasing cross section of the clip portion would allow for greater flexing at the ends which in turn would make it easier to operate the clip by requiring less force," is simply not applicable to the clip of Bartholomew since Bartholomew clearly indicates that flexibility is not an issue: Bartholomew provides a hand-release tab 68, which facilitate easy flexing of the annular arms 64. (Bartholomew, p. 16, l. 1-4; Figs. 7-10). Accordingly, the

assertion that one of ordinary skill in the art would derive any motivation to modify the clip of Bartholomew based on the teachings of Hay because of the alleged desire to facilitate "greater flexing at the ends" is simply unsupported.

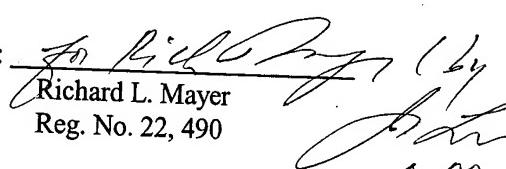
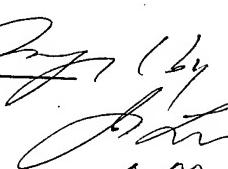
For at least the reasons discussed above, withdrawal of the rejection under 35 U.S.C. § 103(a) with respect to claim 16 is hereby respectfully requested.

IV. CONCLUSION

In light of the foregoing, Applicants respectfully submit that all pending claims are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,
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